"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

DEMENT'YEV, V.M.; SHKLYAR, M.S.

Differentiated design and the diaphragming of cast iron recuperators. Stal' 20 no.11:1042-1045 N '60. (MIRA 13:10)

1. Makeyevskiy metallurgicheskiy zavod.
(Heat regenerators)
(Pipe, Cast iron--Thermal properties)

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KANFER, V.D.; SHKLYAR, M.S.

Lever-type dust collectors for gas purification. Metallurg 6 no.3:12-13 Mr '61. (MIRA 14:5)

1. Makeyevskiy metallurgicheskiy zavod.
(Dust collectors)
(Gases--Purification)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

ZHUKOV, A.I., inzh.; KHIL'KO, M.M., inzh.; MERSHCHIY, N.P.; SHKLYAR, M.S.; SLEZ, L.G.

Practice of firing open-hearth furnaces with natural gas by the method of self-carburation. Stal' 21 no. 4:307-311 Ap '61. (MIRA 14:4)
(Open-hearth furnaces—Combustion) (Gas, Natural)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

KHIL'KO, M.M.; SHKLYAR, M.S.

Firing open-hearth furnaces with a mixture of coke and natural gases. Metallurg 6 no.7:11-13 Jl '61. (MIRA 14:6)

1. Iz Informatsionnogo listka TSentral'nogo byuro tekhnicheskoy informatsii Stalinskogo sovnarkhoza.
(Open-hearth furnaces) (Gas as fuel)

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ZHUKOV, A.I.; KHIL'KO, M.M.; SHKLYAR, M.S.; KAZANTSEV, Ye.I. Prinimali uchastiye: BLASHCHUK, N.M., inzh.; YARMYSH, V.A., inzh.; PARKHOMENKO, D.M., inzh.; BULI, V.G., inzh.; BIDENKO, R.V., inzh.; PASIKOV, N.V., inzh.; ZEMLYANOY, N.G., inzh.; TARASENKO, A.A., inzh.

Firing open-hearth furnaces with a mixture of cold coke and natural gases. Stal' 21 no.12:1068-1070 D '61.
(MIRA 14:12)

(Open-hearth furnaces--Equipment and supplies)
(Gas as fuel)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, M.S.; KHALIMOVA, L.A.

Increase in the antibiotic activity of micro-organisms under the effect of the culture medium. Agrobiologiia no.5:680-683 S-O'63. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy mikrobiologii, Leningrad.

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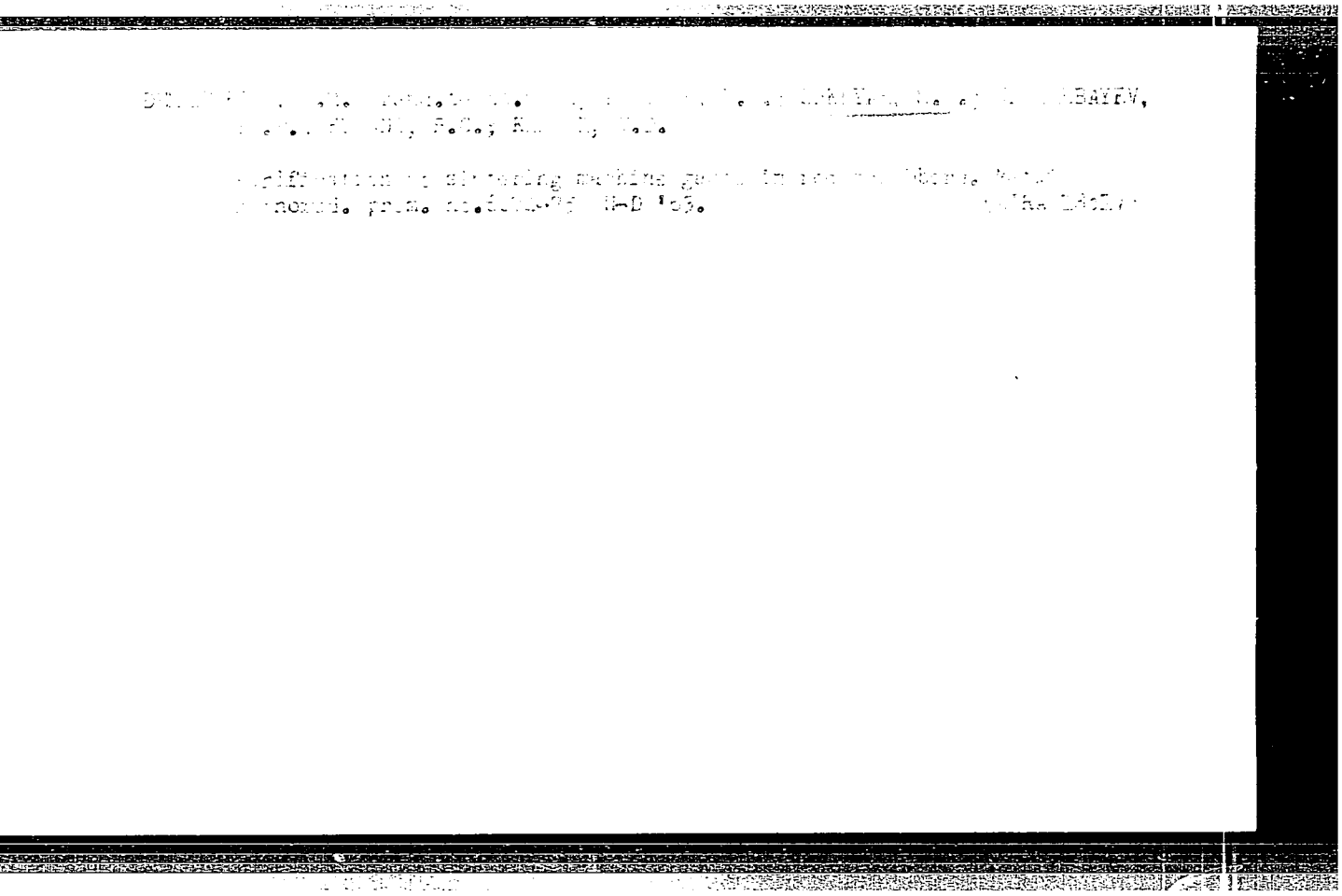

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

KAZANTSEV, Ye.I.; KOGADEYEV, A.A.; SHKLYAR, M.S.; FOMINA, Z.M.

Redesigning blooming mill regenerator soaking pits with an extended working chamber. Stal' 24 no.1:82-84 Ja '64. (MIRA 17:2)

1. Donetskiy politekhnicheskiy institut i Makeyevskiy metallurgicheskiy zavod.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

POKOTILO, Ye.P.; SHKLYAR, M.S.

Operation of a remodeled 400-ton open-hearth furnace fired by high-calorie gas. Met. i gornorud. prom. no.5:15-18 S-O '64. (MIRA 18:7)

1. Institut ispol'zovaniya gaza AN UkrSSR (for Pokotilo).

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L 16976-66
ACC NR: AP6009019 SOURCE CODE: UR/0411/65/001/001/0102/0108

AUTHOR: Shklyar, M. S. 26 B

ORG: All-Union Scientific Research Institute of Agricultural Microbiology, Leningrad (Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy mikrobiologii)

TITLE: Effect of gibberellin on microorganisms and on the enzymatic activity of barley during malting (survey)

SOURCE: Prikladnaya biokhimiya i mikrobiologiya, v. 1, no. 1, 1965, 102-108

TOPIC TAGS: soil bacteriology, microbiology, processed plant product, antibiotic

ABSTRACT: The article presents literature data and test findings of the All-Union Scientific Research Institute of Agricultural Microbiology on the effects of gibberellin. Test findings show that low gibberellin concentrations (0.1 to 100 mg/l) added to liquid or semiliquid culture media do not affect azotobacter growth and that higher gibberellin concentrations (300 and 500 mg/l) display a retardant effect. Literature data on effects of gibberellin are highly contradictory largely due to differences in investigation methods and subjects. No dose effect curves can be established at this

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ACC NR: AP6009019

time, and the only certain conclusion that may be drawn is that gibberellin in concentrations of 250 mg/l produces a retardant effect on pure microorganism cultures. An analysis of gibberellin effects on malting activity in the brewing industry shows that gibberellin treatment of grain accelerates seed sproutability, activates enzymatic processes, improves the quality of the malt and beer and permits use of non-conditioned grain with damaged embryos. Optimal doses for gibberellin range from 10 to 50 mg/l. All experimental and literature data on the use of gibberellin treated grain in beer brewing are highly favorable.

SUB CODE: 06 / SUBM DATE: 14Oct64 / ORIG REF: 013 / OTH REF: 055

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

KHUDYAKOV, Ya.P.; SHKIYAR, M.G.; SAVADEROV, Yu.P.

Antifungin antibiotic produced by bacteria of the genus Pseudomonas. Prikl. biokhim. i mikrobiol. 1 no.2.186-190 Mr-Ap '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy mikrobiologii.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

1. SHKLYAR, M. Z.: KIR'YALOVA, Ye. N.

2. USSR (600)

4. Yeast

7. Mixed yeast cultures in making fruit wines. Trudy Vses.inst.sel'khoz.mikrobiol., 11, no. 2, 1951.

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

1. SHKLYAR, M. Z.

2. USSR (600)

4. Microorganisms, Nitrogen-Fixing

7. Interaction of azotobacter and Clostridium pasteurianum in a mixed culture. Trudy Vses.inst.sel'khoz.mikrobiol. 11, no. 2, 1951.

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

1. KIR'YALOVA, YE. N. AND SHKLYAR M. Z.

2. USSR (600)

7. "The Yeast Microflora of Fruit and Berry Juices", Trudy Vsesoyuzn. Nauch.-Issled. In-ta S.-Kh. Mikrobiologii (Works of the All-Union Science-Research Institute of Agricultural Microbiology), Vol 11, No 2, 1951, pp 106-115.

9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR. M.Z.

The effect of aeration on the proliferation rate and fermentation intensity of mixed yeast cultures. M. Z. Shklyar. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Sel'skokhoz. Mikrobiol.* 12, No. 2. 130–5(1953); *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 1495.—The study was made with *Saccharomyces ellipsoideus* (I), *S. apiculatus* (II), and *Torulopsis* (III) in pure culture and in mixt. in sterile apple juice. Aeration was accomplished by vigorous shaking, varying depths of culture medium and of the medium surface area. Rate of cell proliferation, intensity of alc. production, titrable and volatile acids, and pH were detd. at the end of each expt. Access of air in the case of II and III favorably affected cell proliferation and alc. production. Pure cultures yielded better results than mixed cultures at all degrees and types of aeration. Surface of the medium was more of a determining fact than its depth. Alc. yield was higher in aerated cultures, and usually at the expense of cell proliferation, especially immediately after inoculation. In mixed culture, I replaced II and III, the more so the less the access of free O_2.

B. S. Levine

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

Shklyar, M. Z.

The selection of yeast strains for the combined culturing in wine making. E. N. Kir'yalova and M. Z. Shklyar. *Trudy Vsesoyuz. Nauch. Issledovatel. Inst. Sel'skokhoz. Mikrobiol.* 12, No. 2, 141–2(1953); *Referat. Zhur. Khim. Biol. Khim.* 1955, No. 11084.—Yeasts isolated from fruits and berries vary little morphologically but differ considerably in their biochem. properties. It was found that some strains of *Saccharomyces apiculatus* ferment no sugars while other strains produce up to 4–5% alc. Most active strains of *S. apiculatus*, *Torulopsis*, and *S. ellipsoideus* were investigated for their suitability in wine producing individually and in some combinations. Best results appear to have been obtained with a combination of the best strains of *S. apiculatus* and *Torulopsis* of 1% inoculation each.

B. S. Levine

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, M.Z., kandidat biologicheskikh nauk.

Effect of aerobes on the activeness of Clostridium Pasteurianum in mixed cultures. Dokl.Akad. sel'khoz. 21 no.8:32-37 '56. (MLRA 9:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy mikrobiologii. Predstavleno akademikom I.I. Samoylovym.
(Clostridium pasteurianum) (Bacteria, Aerobic)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

KIR'YALOVA, Yevdokiya Nikitichna; SHKLYAR, Mar'yasya Zalmanovna; VOROB'YEV, F.I., redaktor; FRIDMAN, Z.L., tekhnicheskiy redaktor

[Fruit and berry wines with pure yeast cultures] Plodovo-yagodnye vina na chistykh kul'turakh drozhzhei. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 36 p. (MLRA 10:3)
(Fruit wines)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

USSR/Soil Science - Biology of Soils. J

Abs Jour : Ref Zhur Biol., No 22, 1958, 100048

Author : Bychkovskaya, A.L., Shklyar, M.Z.
Inst : -
Title : The Adaptability of Azotobacter Strains in Connection with Their Carbon Nutrition.

Orig Pub : Byul. nauchno-tekh. inform. po s.-kh. mikrobiol., 1957, No 3, 5-6

Abstract : No abstract.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

BYCHKOVSKAYA, A.L.; SHKLYAR, M.Z.

Acid-resistant variant of Azotobacter. Mikrobiologiia 28 no.3:336-342 My-Je '59. (MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy mikrobiologii.
(AZOTOBACTER
acid-resist. variant (Rus))

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, M.Z.

Interrelationships of Bacillus megatherium var. phosphaticum with free-living nitrogen-fixing bacteria. Trudy Vses. inst. sel'khoz. mikrobiol. 16:62-73 '60. (MIRA 13:9)

(Bacillus megatherium) (Micro-organisms, Nitrogen-fixing)
(Soil inoculation)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SELIBER, G.L., otv.red.; BERESNEVA, V.N., red.; NORKINA, S.P., red.; SHKLYAR, M.Z., red.; KARTASHEVA, N.M., red.; ANTONOVA, N.M., khudozh.-tekhn.red.

[Russian microbiologists S.N.Winogradsky and V.L.Omelianskii] Russkie mikrobiologi S.N.Vinogradskii i V.L.Omelianskii. Moskva, Izd-vo M-va sel'.khoz.SSSR, 1960. 83 p. (MIRA 13:10)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina.
(Winogradsky, Serge, 1856-1953)
(Omelianskii, Vasilii Leonidovich, 1867-1928) (Soils--Bacteriology)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, M.Z.; VOYEVODIN, A.V.; BESHANOV, A.V.

Effect of herbicides on soil microflora when applied before the emergence of cultivated plants. Agrobiologiia no.2:222-225 Mr-Ap '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy mikrobiologii, Leningrad.
(Soil micro-organisms)
(Herbicides)

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SHKLYAR, M.Z.

Effect of the metabolic products of Fusarium moniliforme on the germination of seeds and the growth of plants. Trudy Inst. mikrobiol. no.11:318-326 '61. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy mikrobiologii.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, N.M.

Method for the accelerated indication of bacterial infection. Voen. med. zhur. no.2:47-49 F '59. (MIRA 12:7)
(INFECTION, diag.
accelerated method (Rus))

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, N.M., podpolkovnik meditsinskoy sluzhby

Accelerated indication of bacteria by means of an adsorbent agglutination reaction loaded with a hapten. Voen.-med. zhur. no.4:47-51 Ap '61. (MIRA 15:6)
(BACTERIOLOGY—TECHNIQUE)
(HAPTENS)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

PETROVA, L.V., inzh.; SHKLYAR, R.S., kand. tekhn. nauk; YAKIMETS, Ye.M., kand. tekhn. nauk

X-ray study of the structure and the composition of boiler incrustations, sludges, and deposits. Teploenergetika 11 no.10:34-36 O '64. (MIRA 18:3)

1. Ural'skiy politekhnicheskiy institut im. Kirova.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, R. SH.

"Magnetometric Construction of Thermokinetic Decomposition Diagrams of Austentite in the Process of Continuous Cooling of some Industrial Grades of Steel." Cand Tech Sci, Ural Polytechnic Inst, Sverdlovsk, 1954. (RZhKhim, No 23, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKIAR, R. SH., AND POPOV, A. A.

Versatile Magnetometer for Studying Slow Transformation in Ferromagnetics

A magnetometer, its basic part consisting of a double magnet made of two E-shaped iron cores, is described. The variation of magnetic characteristics of the specimen is studied by the variation of the emf of the dynamo, rotating in its middle. (RZhFiz, No. 8, 1955) Tr. Uralsk. Politekhn. in-ta, 46, 1954, 34-49.

SO: Sum. No. 744, 8 Dec 55 - Supplementary Survey of Soviet Scientific Abstracts (17)

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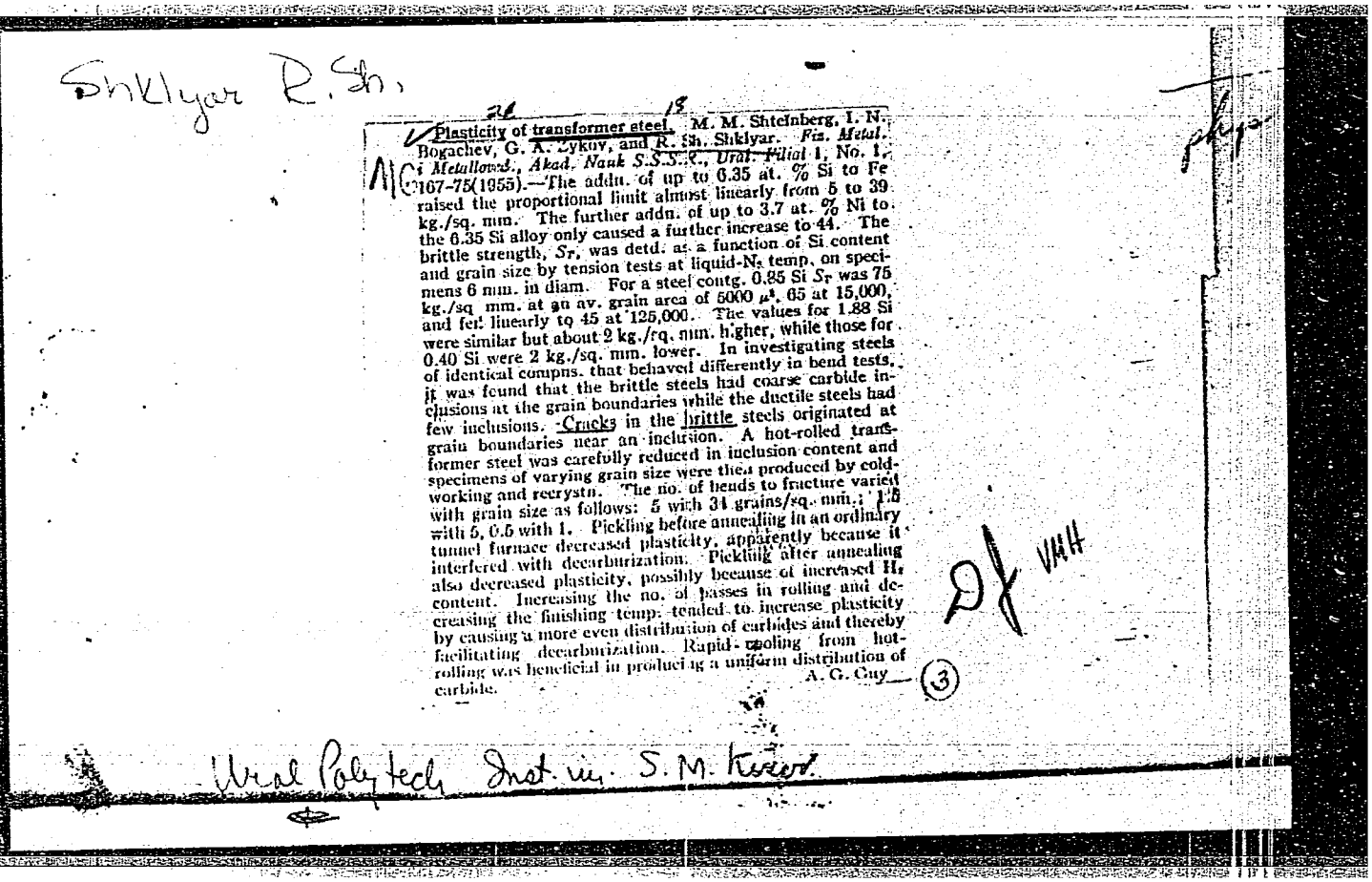

Shklyar R. Sh.

Plasticity of transformer steel. M. M. Shteinberg, I. N. Bogachev, G. A. Zykov, and R. Sh. Shklyar. *Fiz. Metal. i Metalloved., Akad. Nauk S.S.S.R., Ural. Filial* 1, No. 1, 167-75(1955).—The addn. of up to 6.35 at. % Si to Fe raised the proportional limit almost linearly from 5 to 39 kg./sq. mm. The further addn. of up to 3.7 at. % Ni to the 6.35 Si alloy only caused a further increase to 44. The brittle strength, S_T, was detd. as a function of Si content and grain size by tension tests at liquid-N_2 temp. on specimens 6 mm. in diam. For a steel contg. 0.85 Si S_T was 75 kg./sq. mm. at an av. grain area of 5000 μ^2, 65 at 15,000, and fell linearly to 45 at 125,000. The values for 1.88 Si were similar but about 2 kg./sq. mm. higher, while those for 0.40 Si were 2 kg./sq. mm. lower. In investigating steels of identical compns. that behaved differently in bend tests, it was found that the brittle steels had coarse carbide inclusions at the grain boundaries while the ductile steels had few inclusions. Cracks in the brittle steels originated at grain boundaries near an inclusion. A hot-rolled transformer steel was carefully reduced in inclusion content and specimens of varying grain size were then produced by cold-working and recrystn. The no. of bends to fracture varied with grain size as follows: 5 with 34 grains/sq. mm.; 1.5 with 5, 0.5 with 1. Pickling before annealing in an ordinary tunnel furnace decreased plasticity, apparently because it interfered with decarburization. Pickling after annealing also decreased plasticity, possibly because of increased H_2 content. Increasing the no. of passes in rolling and decreasing the finishing temp. tended to increase plasticity by causing a more even distribution of carbides and thereby facilitating decarburization. Rapid cooling from hot-rolling was beneficial in producing a uniform distribution of carbide.

A. G. Guy

(3)

Ural Polytech Inst. im. S. M. Kirov.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, R.SH.

Metals

Determination of Austenite Content from the Magnetic Saturation. A. A. Popov and R. Sh. Shklyar. (*Zavodskaya Laboratoriya*, 1955, 21, (6), 677–685). [In Russian]. Problems involved in the magnetic investigation of the kinetics of the decomposition of super-cooled austenite are discussed. The effects on the accuracy of magnetometric phase-composition investigations of the type of apparatus, choice of standard, method of calculating the quantity of ferromagnetic or paramagnetic components, test-piece dimensions and temperature measurement are considered. In isothermal and thermokinetic studies of austenite decomposition strict control of test-piece temperature is essential. Best results are obtained with test-pieces in the form of plates 0·3–0·5 mm thick to whose surface the thermocouple is welded directly.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

Shklyar, R. Sh.

USSR / Solid State Physics / Phase Transformation in Solid Bodies E-6

Abs Jour : Ref Zhur - Fizika, No. 5, 1957 No. 11720

Author : Shklyar, R. Sh., Popov, A. A.

Inst :

Title : Thermokinetic Diagrams of the Decay of Austenite in Certain Commercial Brands of Stee.

Orig Pub : Probl. metalloved. i ter,. abrabotok. Moskva - Sverdlovsk, Mashgiz, 1956, 157 - 178

Abstract : Description of a magnetometer constructed by the authors, to permit a study of either fast or slow transformations, with photographic recording of the temperature, the time, and the magnetic characteristics of the investigated steels. This magnetometer was used to investigate the decay of austenite during the process of continuous cooling, and to plot thermokinetic diagrams for many carbon and alloyed structural steels. The thermokinetic diagrams of carbon and nickel steels.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SUVOROV, Leonid Mikhaylovich; PITADE, N.A., inzh.retsenzent; SHKLYAR, R.Sh., kand.tekhn.nauk, red.; YERMAKOV, N.P., tekhn.red.

[Elements of X-ray detection of defects; a manual for X-ray operators] Elementy rentgenodefektoskopii; posobie dlia rentgenos"dmshchikov. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 122 p. (MIRA 11:2)
(X rays--Industrial applications)
(Machinery industry--Quality control)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

18(7), 18(1)

AUTHORS: Shteynberg, M. M., Kir'yanova, N. P., Shklyar, R. Sh, Malinov, L. S.

SOV/163-58-4-32/47

TITLE: Investigation of Aging and Mechanical Properties of Beryllium Bronze (Issledovaniye stareniya mekhanicheskikh svoystv berilliyevoy bronzy)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 4, pp 189 - 192 (USSR)

ABSTRACT: The investigation concerned aging and mechanical properties of the beryllium bronze as well as the influence of cold plastic deformation on notch impact strength and hardness of the bronze. The X-ray structure investigation of the aging of beryllium bronze with 2.05% Be showed that decomposition of the α-solution can take place in two phases as well as in one phase. At aging temperatures of 200 and 250° decomposition occurs in two phases and is distinctly to be seen in the X-ray diagrams after aging for 2 hours, or 30 minutes, respectively. At an increase of the aging time up to 8 hours at 200°; and up to 4 hours at 250°, the characteristics of the one-phase decomposition begin to show at the same time.- As from 300°, decomposition shows one-phase character. An inc-

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rease in the lattice period of the α-solution is observed after aging for more than 6 minutes at 300°, for over 2 minutes at 350°, and for over 30 seconds at 400°.- The line of the new phase (γ-phase) is clearly visible in the X-ray diagrams only after aging at 350°.- At the temperatures of two-phase decomposition and at 300°, where the decomposition starts to be one-phase, the electric resistance increases as compared with the one in the hardened state.- Plastic cold deformation greatly speeds up the two-phase decomposition. An intense change in the mechanical properties of bronze begins at 200°, i.e. at the temperature where a two-phase decomposition of the α-solution is ascertained by the X-ray structure analysis. With an increase in the aging temperature, the proportionality limit, the breaking limit, the hardness and the initial factor of consolidation increase while the relative stretching, the compression of the cross section and the notch impact strength decrease. At an aging temperature of 350°, these properties reach their extreme values; at a further rise in temperature, they begin to change in the opposite direction.- The final factor of consolidation

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Investigation of Aging and Mechanical Properties of Beryllium Bronze SOV/163-58-4-32/47

(at the end of consolidation) undergoes rather little change in dependence on temperature and aging time. Aging for two hours at 350° gives the maximum strength properties. Retarded cooling after aging, as from 450°, leads to the mentioned increase in strength properties and to the reduction of plasticity and, in particular, of the notch impact strength, as compared with accelerated cooling in water.- At otherwise equal strength properties, a bronze aged at under 350° has a higher notch impact strength than a bronze aged at over 400°. Plastic deformation leads to a certain increase in notch impact strength, both before and after aging. The increase in notch impact strength is particularly great when the plastic deformation occurs before or after aging at the temperatures of two-phase decomposition (200 and 250°). There are 3 figures and 1 Soviet reference.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)

SUBMITTED: October 4, 1957

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

AUTHORS: Shklyar, R. Sh., Popov, A. A., Salov, V. L. SOV/32-24-7-50'65

TITLE: A New Magnetometer With Ferromagnetic Probe (Novyy magnitometr s ferromagnitnym zondom)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 7, pp. 892 - 893 (USSR)

ABSTRACT: For investigating the decomposition of austenite under isothermal conditions or at a continuous cooling of different rate a magnetometer with automatic recording of the changes in temperature and the magnetization of the sample was designed. In order to avoid the disadvantages of a rotating armature it was replaced by a ferromagnetic probe. The probe is a differential transformer with a rectangular cross-section armature in the central cross part of the magnetometer. The armature is a G-shaped lamella of transformer steel and of certain dimensions with a double winding, with the one of them being fed by the a.c.from a special generator, and the other being connected to the loop of the oscillograph. In the case that the sample is not in the magnetometer or in paramagnetic state the EMF will annihilate one another mutually, while a ferromagnetic

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sample or the transition of the sample from the paramagnetic to the ferromagnetic state causes an additional magnetic flux. This causes an alternating voltage in the probe which depends on the quantity of the ferromagnetic phase in the sample. A diagram of this function is given as well as an oscillogram obtained in the cooling of a steel sample. The experimental results obtained by means of this magnetometer agree well with those of the magnetometer with rotating armature. There are 3 figures and 1 reference, which is Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im.S.M.Kirova(Ural Polytechnical Institute imeni S.M.Kirov)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, R.Sh.; POPOV, A.A.; KONOVALOV, V.I.

Thermokinetic diagram of the decomposition of supercooled austenite in some high-carbon steels. Trudy Ural. politekh. inst. no.68:23-33 '58. (MIRA 12:7)

(Steel alloys--Metallography) (Austenite)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

POPOV, A.A.; SHKLYAR, R.Sh.; PERMINOV, P.P.

Structure and properties of fan-shaped crystals formed during the solidification of alumium alloys. Izv. vys. ucheb. zav.; tsvet. met. 2 no.2:111-114 '59. (MIRA 12:7)

1.Ural'skiy politekhnicheskiy institut, Kafedra metallovedeniya i termoobrabotki.
(Metal crystals) (Aluminum alloys--Metallography)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

32622
S/137/61/000/011/094/123
A060/A101

18.1220

AUTHORS: Shteynberg, M. M., Kir'yanova, N. P., Shklyar, R. Sh., Malinov, L.S.

TITLE: Ageing kinetics and mechanical characteristics of beryllium bronze

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1961, 24, abstract 11I149 (V sb. "Probl. metalloved. i term. obrabotki", no. 2, Moscow - Sverdlovsk, Mashgiz, 1960, 143-167)

TEXT: By means of an X-ray structure investigation it was established that in the process of ageing of Be-bronze containing (in %): Be 2.05, Ni 0.40, Fe 0.08, Si 0.12, the decomposition of α-solid solution may take place both by the 2-phase (at 200 - 250°C) and by the single phase ($\geqslant$ 300°C) process. The lines of the new phase (γ) appear after ageing at 350°C. Ageing at temperatures $<$ 300°C raises the ρ of the bronze as result of the considerable faults in the crystal lattice. At the temperatures of the single phase decomposition one observes a considerable lowering of ρ with a simultaneous attainment of the maximum of the crushing stress: 2-hr ageing at 350° yields σ_b of 136 kg/mm^2, σ_p 115 - 120 kg/mm^2 and H_B 300 - 370. The ductility and a_k of the alloy are very low. The intense lowering of the strength characteristics, raising of the

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Ageing kinetics and mechanical characteristics ...

δ, ψ, a_k, and the sharp lowering of ρ after ageing at temperatures $\geqslant 400 - 450^{\circ}C$ are the result of coagulation of the separated particles of the γ-phase, of the enlargement of grains and grain blocks, and also of the coherence disturbance on the phase separation boundary. Slow cooling from a temperature $\geqslant 400^{\circ}C$ strengthens the alloy as compared to water hardening. At equal strength characteristics, ageing at temperatures $< 350^{\circ}$ yields a higher a_k than at $> 450^{\circ}C$. Cold plastic deformation of hardened alloy considerably accelerates the 2 phase decomposition and raises the a_k and the brittle strength. A double ageing at $250^{\circ}C$ with cold plastic deformation before the second ageing ensures the same strength characteristics as does ageing at $300^{\circ}C$, but the a_k is raised by a factor of 2. Lower strength characteristics but also a lower tendency to brittle failure are possessed by Be-bronze aged at $250 - 300^{\circ}C$ in combination with cold plastic deforming. Ageing at temperatures $> 400^{\circ}C$ is undesirable, since it lowers the brittle strength of the alloy.

G. Tyurin

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

Shklyar, R. Sh.

S/129/60/000/06/019/022
E073/E535

AUTHOR: Mints, R. I., Candidate of Technical Sciences

TITLE: All Union Scientific-Technical Seminar on Improving the Cavitation Resistance of Components, Sverdlovsk

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, Nr 6, pp 58-60 (USSR)

ABSTRACT: The seminar was held at the initiative of the Problems Laboratory for Metallurgy at the Ural Polytechnical Institute imeni S. M. Kirov jointly with other organizations. In the seminar representatives of research establishments and works from Sverdlovsk, Perm', Chelyabinsk, Barnaul, Gor'kiy, Odessa, Leningrad, Yerevan, Murmansk, Khar'kov and other places participated. This report gives brief summaries of the following papers which were read:
G. D. Ter-Akopov, Candidate of Technical Sciences, "Cavitation failures in hydraulic turbines";
L. I. Ponarskiy, Engineer, "Cavitation in hydraulic turbines"; M. I. Kurasevich, Engineer, "Cavitation failures in runners of centrifugal pumps"; Marinin, A.A., Engineer, "Cavitation failures in marine propellers";

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N. N. Ivanchenko, Candidate of Technical Sciences, "Cavitation failures in diesel engines"; A.P.Chervyakov, Engineer, "Increase of the cavitation-erosion stability of jacket and cylinder liners of the diesel engines D6 and D12"; I.N. Bogachev, Doctor of Technical Sciences, "Mechanism of the cavitation failure of metallic alloys and principle for the selection of such alloys";
R.I. Mints, Candidate of Technical Sciences, "Combatting cavitation failure by using surface-active additions to the liquid phase of closed systems"; R.Sh. Shklyar, Candidate of Technical Sciences, D.P.Slyusareva, Engineer, and N.N.Syutkin, Engineer, "Structural changes in the initial stages of cavitation failure"; T.M.Petukhova, Engineer, "Influence of the structure on the resistance to cavitation of bronze"; V.V. Gavranek, Candidate of Technical Sciences and D.N. Bol'shutkin, Engineer, "Cavitation erosion of metals, thermal and mechanical effects in the cavitation zone".

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

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E111/E452

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AUTHORS: Bogachev, I.N., Shklyar, R.Sh., Slyusareva, L.D., Mints, R.I. and Syutkin, N.N.

TITLE: Change in Structure and Phase Composition of Some Austenitic Steels in the Initial Stages of Cavitation Failure

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol.11, No.1, pp.86-93

TEXT: Bogachev and Mints have previously shown that the resistance to cavitation of austenitic nickel manganese, chromium-nickel and chromium-manganese steels varies greatly (Ref.1). The object of the present work was to study structural changes during cavitation failure in the surface layers of the austenitic steels of the following types and compositions (%):

		C	Ni	Mn	Cr
1Kh18N8	1Х18Н8	0.12	8.39	0.92	18.05
30G10Kh9	30Г10Х9	0.31	0.13	10.30	9.117
40N25	40Н25	0.40	25.00	0.20	0.13
80G14	80Г14	0.81	1.10	14.50	0.40

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E111/E452

Change in Structure and Phase Composition of Some Austenitic Steels in the Initial Stages of Cavitation Failure

Specimens were plunged in water after holding for 30 minutes at 1050°C. After removal of the outer layers, specimens were subjected to the cavitation action of a magnetostriction vibrator for 5, 10, 15 and more minutes. Phase composition changes were qualitatively determined from X-ray patterns obtained from a polished section. Structural changes were determined from interference-line width and also changes in shape and dimensions of individual spots. The back-reflection camera provided three images of the same interference ring on one film at different specimen-film distances. Spot dimensions were measured on all rings in tangential and radial directions with the aid of a type ИЗА-2 (IZA-2) comparator. Patterns were obtained from the same part of a given specimen after various treatments. Line width was measured on patterns obtained separately in chromium radiation with rotation of both specimen and film. Two of the steels were also studied electron-microscopically before and after testing for 5 and 10 minutes. The work showed that the austenite lines obtained exclusively from all specimens before testing were

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E111/E452

Change in Structure and Phase Composition of Some Austenitic Steels in the Initial Stages of Cavitation Failure

supplemented in three of the steels by other lines after testing. The transformation of austenite was different in two steels: in type 1Х18Н8 (1Kh18N8) the alpha-phase was formed; in type 30Г10Х9 (30G10Kh9) epsilon-phase was formed as well. This was confirmed in the electron photomicrographs. In type 40Н25 (40N25) steel the transformation was similar to that in 1Kh18N8 but slower, while in 80Г14 (80G14) only austenite lines were found even after prolonged specimen treatment. Interference spots generally survived specimen treatment and spot changes were similar in all four steels. The situation is qualitatively represented by the authors in terms of changes in the disorientation angle for individual crystals. In Fig.5, this angle (minutes) is plotted against treatment time (minutes) for various crystals of 40N25 (plot "a") and 80G14 (plot "b") steels. For all the steels the width of the $(311)_\beta$ line increased in the first stages of treatment and then became steady. From the photometric curve of the $(311)_\beta$ line dimensions of mosaic blocks and II type disturbances were found (as in Ref.2): in the first

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E111/E452

Change in Structure and Phase Composition of Some Austenitic Steels in the Initial Stages of Cavitation Failure

few minutes the former decrease rapidly and the latter increase; the intensity of these effects being different for the different steels. The authors conclude that resistance to cavitation disruption rises when tetragonal martensite, epsilon phase and fine carbides are liberated within the austenite grain; resistance falls when alpha-phase (low in carbon) is liberated either within or around the grain. There are 7 figures, 2 tables and 3 Soviet references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S.M.Kirova (Ural Polytechnical Institute imeni S.M.Kirov)

SUBMITTED: April 4, 1960

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

S/126/61/012/005/006/028
E025/E435

AUTHORS: Yershova, L.S., Bogachev, I.N., Shklyar, R.S.

TITLE: The effect of deformation on the formation of ε-phase in manganese steels

PERIODICAL: Fizika metallov i metallovedeniy, v.12, no.5, 1961, 670-677 + 1 plate

TEXT: The kinetics of formation of ε-phase and the effects of plastic deformation of the $\gamma \rightarrow \varepsilon$ transformation are studied in a series of C-Mn-Ni steels. In a 20% Mn steel the $\gamma \rightarrow \varepsilon$ transformation is found to take place at a 100°C for steel with a C content below 0.1%; however, if the C content is increased to 0.3% the transformation temperature falls to below zero. Under plastic deformation far greater strain hardening is exhibited by the low-C steel due to the larger capacity for strain hardening of the ε-phase. The behaviour is compared with a 26% Ni steel, where the austenite breaks down to ferrite under plastic deformation and with an 18% Ni, 6% Mn steel where the austenite does not undergo a transformation during deformation. Further studies on the Mn steels show that the character of the phase transformation on plastic deformation depends on the

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relative values of the deformation temperature and the critical temperatures of $\gamma \rightarrow \alpha$ and $\gamma \rightarrow \varepsilon$ transformations. D.S.Steynberg is mentioned in the article in connection with his testing apparatus. There are 7 figures, 2 tables and 4 references: 1 Soviet-bloc and 3 non-Soviet-bloc. The three references to English language publications read as follows:
Ref.1: Walters F.M., Welles C. Trans. ASM, v.24, no.2, 1936, 359;
Ref.3: Troiano A.R., McGuire F.T. Trans. ASM, v.31, 1943, 340;
Ref.4: Cina B. Acta met, v.6, no.12, 1958.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S.M.Kirova
(Ural Polytechnical Institute im. S. Kirov)

SUBMITTED: February 27, 1961

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

KUZNETSOV, S.I.; DEREVYANKIN, V.A.; SHKLYAR, R.Sh.

Problem of "trisodium hydroaluminate." Zhur.prikl.khim. 35 no.12:2588-2591 D '62. (MIRA 16:5)
(Sodium aluminates)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

KNYAZYUK, L.V.; ZAKHAROV, B.P., inzh., retsenzent; BALAZOVSKIY, M.Ya., red.; PITADE, N.A., red.; SHKLYAR, R.Sh., red.; SHUR, B.L., red.; DUGINA, N.A., tekhn. red.

[Equipment of an X-ray laboratory] Oborudovanie rentgenovskoi laboratorii. Moskva, Mashgiz, 1963. 79 p. (Biblioteka kontrolera-mashinostroitelia, no.3) (MIRA 16:7)
(X rays--Industrial applications)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

L 18103-63 EWP(q)/EWT(m)/BDS AFFTC/ASD Pad JD/HW
ACCESSION NR: AP3002844 S/0126/63/015/006/0860/0866

AUTHORS: Chumakova, L. D.; Bogachev, I. N.; Shklyar, R. Sh; Mints, R. I.

TITLE: Phasal and structural changes in the surface layer of austenite alloys at the initial stage of the cavitation effect

SOURCE: Fizika metallov i metallovedeniye, v. 15, no. 6, 1963, 860-866

TOPIC TAGS: cavitation effect, austenite alloy , Ni, Mn, phasal change , structural change

ABSTRACT: Structural changes in the surface layer of austenitic Ni and Mn alloys subjected to minute impacts were studied by x-rays. It was established that the cavitation effect results in the increase of submicroscopic nonhomogeneity of intragranular structure and in a partial decomposition of austenite. Depending on their chemical composition, the manganese samples showed a partial decomposition of austenite and the formation of ε-phase or of ε-phase and martensite. The Ni samples showed decomposition of a small amount of austenite and the formation of martensite. The conversions $\gamma \rightleftarrows \varepsilon$ in the G30 alloy and $\gamma \rightleftarrows \varepsilon \rightarrow \alpha$

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L 18103-63
ACCESSION NR: AP3002844

in the 40G14 steel harden the alloys and increase their resistance to cavitational destruction. The high resistance of the stable manganese austenite 40G30 to the impacts proves that phasal transformations are not the only factors determining the high stability of alloys with respect to the cavitation effect. Orig. art. has: 1 table, 3 graphs, and 2 photographs.

ASSOCIATION: Ural'skiy politeknicheskiy institut im. S. M. Kirova (Ural Polytechnic Institute)

SUBMITTED: 31Oct62 DATE ACQ: 23Jul63 ENCL: 00

SUB CODE: ML NO REF SOV: 005 OTHER: 001

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

L 18553-63 EWP(q)/EWT(m)/BDS AFFTC/ASD Pad JD/HW/WB

ACCESSION NR: AP3002851 S/0126/63/015/006/0914/0918

61
59

AUTHORS: Mar'yevich, V. P.; Shklyar, R. Sh.

TITLE: Internal friction in Ni and Mn austenite

SOURCE: Fizika metallov i metallovedeniye, v. 15, no. 6, 1963, 914-918

TOPIC TAGS: internal friction, Ni, Mn, austenite, torsional vibration, plastic deformation, amplitude

ABSTRACT: The internal friction in different steel samples was measured by the method of low-frequency torsional vibration. The samples were: G29 Mn-austenite and H39 Ni-austenite steels (which did not change their phase composition during deformation) and also the steels H27 and G19 (in which the austenite was partially decomposed during the plastic deformation process). The relation of the internal friction level to plastic deformation, temperature, and amplitude has been studied. According to the results, the internal friction level of Ni alloys with stable as well as nonstable austenite is higher than that of the Mn alloys. The temperature and amplitude values which corresponded to the beginning of a sudden increase in friction were larger for Ni-austenite than for Mn-austenite. The authors conclude that the results obtained may be explained from the standpoint of the dislocation

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L 18553-63
ACCESSION NR: AP3002851

theory. Dislocations causing internal friction are considerably more mobile in Ni-austenite than in Mn-austenite. This difference in mobility explains the different hardening capacities of the alloys with regard to the degree and nature of plastic deformation. Orig. art. has: 1 table and 6 figures.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova (Ural Polytechnic Institute)

SUBMITTED: 27Nov62 DATE ACQ: 23Jul63 ENCL: 00

SUB CODE: ML NO REF SOV: 005 OTHER: 000

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

ACCESSION NR: AP4029006 S/0126/64/017/003/0467/0468

AUTHOR: Litvinov, V. S.; Mirzoyev, D. A.; Shklyar, R. S.

TITLE: Study of some defects of the crystalline structure of nickel and manganese austenite alloys

SOURCE: Fizika metallov i metallovedeniye, vol. 17, no. 3, 1964, 467-468

TOPIC TAGS: crystalline structure, austenite based alloy, nickel containing alloy, manganese containing alloy, N36 austenite alloy, G38 austenite alloy

ABSTRACT: In their previous work, the authors have shown that it is impossible to explain the distinct hardness of nickel and manganese austenite alloys only by the characteristics of the phase conversion which occur in them during the plastic deformation process. This paper confirms the earlier conclusion made by the authors that the behavior of these alloys during the deformation process is determined by the very nature of the solid solution. The purpose of this paper is to determine the existence of some relation between the concentration of defects in the packing of the metal and the size of the billets as well as the extent of micro-distortions, which are actually one of the basic factors determining the strength of metals. A special x-ray instrument, URS-50I, was used in the experiments. The results of the

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ACCESSION NR: AP4029006

investigation are presented in a table. A higher probability of packing defects is observed in manganese alloy. With a decrease of deformation temperature the probability of defects increases, it increases more intensely in manganese alloys. Two austenite alloys are studied, G38 and N36. The small probability of packing defects in nickel austenite attest to the high energy of their formation which stipulates a greater mobility of dislocation and consequently less intense hardening of austenite in plastic deformation. The high energy of packing defects obviously is one of the basic causes of the low tendencies of nickel austenite to hardening. Orig. art. has: 1 table

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S.M. Kirova (Ural Polytechnical Institute)

SUBMITTED: 02Jly63 DATE ACQ: 27Apr64 ENCL: 00

SUB CODE: ML NO REF SOV: 004 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SOLOGIN, S.A.; SHKLYAR, R.Sh.; [illegible]YOVSKIY, [illegible]

The structure of silver amalgams. Izv. vys. ucheb. zav.; tsvet. met. 8 no.5:59-60 '65. (MIRA 18:10)

1. Ural'skiy politekhnicheskiy institut i Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut obogashcheniya i mekhanicheskoy obrabotki poleznykh iskopayemykh.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, S.; ORLOVA, G.

Does fire blight of fruit trees occur in the U.S.S.R.?
Zashch. rast. ot vred. i bol. 10 no.8:47-48 '65.
(MIRA 18:11)

1. Moskovskoye otdeleniye Vsesoyuznogo instituta sel'-skokhozyaystvennoy mikrobiologii i TSentral'naya laboratoriya po karantinu rasteniy Ministerstva sel'skogo khozyaystva SSSR.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

OL'DEKOP, Yu.A.; KALININA, A.M.; SHKLYAR, S.A.

New method of synthesizing acid chlorides and acid bromides of aromatic acids. Dokl. AN SSSR 139 no.6:1383-1385 Ag '61. (MIRA 14:8)

1. Belorusskiy gosudarstvennyy universitet im. V.I. Lenina.
(Acids, Organic)
(Halides)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

OL'DEKOP, Yu.A.; KOVALEVSKAYA, A.M.; SHKLYAR, S.A.

Thermal reactions of carbon tetrachloride and bromotrichloromethane with organic acids. Zhur. org. khim. 1 no.9:1540-1544 S '65. (MIRA 18:12)

1. Institut fiziko-organicheskoy khimii AN Belorusskoy SSR i Belorusskiy gosudarstvennyy universitet imeni V.I. Lenina. Submitted November 23, 1964.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

ANDON'YEV, S.M., GLAZKOV, P.G. [deceased]; KUCHIN, V.A. KONDRAT'YEV, Ye.M.; LEVITASOV, Ya.M.; MAKAROV, K.I.; PANKRATOV, F.V.; PEVNYY, N.I.; POKRAS, L.M., POCHTMAN, A.M.; TESNER, P.A.; SHEYNFAYN, F.I.; SHKLYAR, T.I., Prinimali uchastiye: BERMAN, M.N.; VARFALOMEYEV, F.L.; ROBIN, M.A.; MOYSIYEVICH, G.I.; SAPIRO, V.S.; ALEKSEYEV, L.M.; POPOVA, R.S.

Heating Martin furnaces with natural gas using reformers. Gaz. prom. 9 no.11:14-17 '64. (MIRA 17:12)

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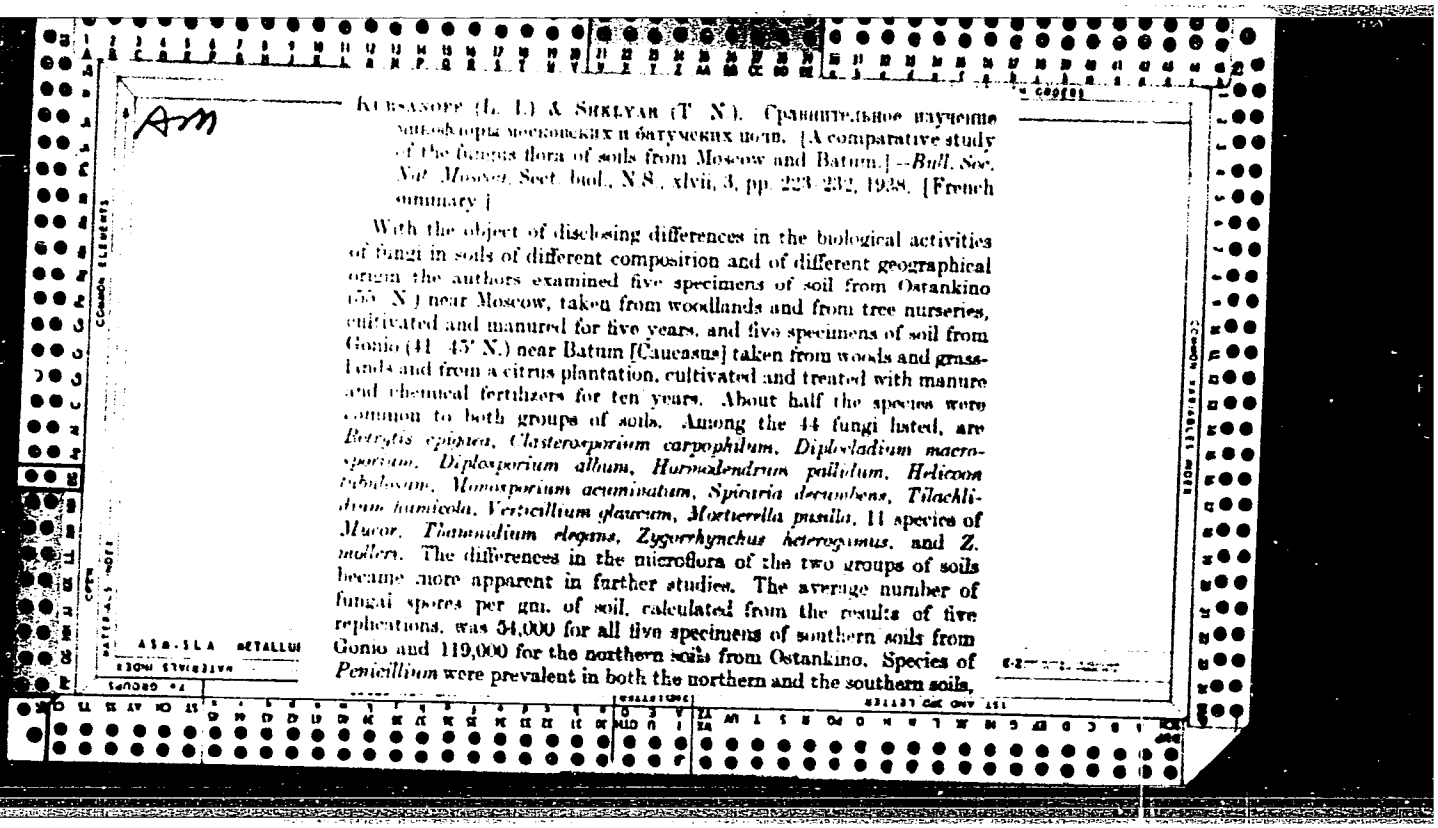

Am

KURSANOFF (L. I.) & SHKLYAR (T. N.). Сравнительное изучение микрофлоры московских и батумских почв. [A comparative study of the fungous flora of soils from Moscow and Batum.]—*Bull. Soc. Nat. Moscou, Sect. biol.*, N.S., xlvii, 3, pp. 223–232, 1938. [French summary.]

With the object of disclosing differences in the biological activities of fungi in soils of different composition and of different geographical origin the authors examined five specimens of soil from Ostankino (55° N.) near Moscow, taken from woodlands and from tree nurseries, cultivated and manured for five years, and five specimens of soil from Gonio (41° 45' N.) near Batum [Caucasus] taken from woods and grasslands and from a citrus plantation, cultivated and treated with manure and chemical fertilizers for ten years. About half the species were common to both groups of soils. Among the 44 fungi listed, are *Botrytis cinerea*, *Clasterosporium carpophilum*, *Dipodiadium macrosporium*, *Diplosporium album*, *Harmodendrum pallidum*, *Helicoon tabulosum*, *Monosporium acuminatum*, *Spicaria derambens*, *Tilachlidium humicola*, *Verticillium glaucum*, *Moxterella pusilla*, 11 species of *Mucor*, *Thamnidium elegans*, *Zygorhynchus heterogamus*, and *Z. moelleri*. The differences in the microflora of the two groups of soils became more apparent in further studies. The average number of fungal spores per gm. of soil, calculated from the results of five replications, was 54,000 for all five specimens of southern soils from Gonio and 119,000 for the northern soils from Ostankino. Species of *Penicillium* were prevalent in both the northern and the southern soils,

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amounting to 66·5 and 68·8 per cent., respectively; and were followed by *Trichoderma* (16·9 per cent.) and *Fusarium* (4·2 per cent.) in the former and *Aspergillus* (8·9 per cent.) and *Trichoderma* (4·5 per cent.) in the latter. On the whole Hyphomycetes predominated in southern soils and Mucorales in those of the northern area. The cultivated and manured soils of both groups contained larger numbers of fungi, especially Mucorales, than the uncultivated. The relative capacity of different species of fungi to decompose cellulose was tested in Cholodny's soil chamber [ibid., xvii, p. 554], into which a few fibres of cotton wool were introduced. Of the cellulose-destroying fungi present in northern soils the most frequent was *Trichoderma lignorum*, followed in order by *T. koningi*, *Penicillium* spp., *Acrostalagmus albus*, *Fusarium* spp., and *Tilachlidium humicola*; whereas with the southern soils the sequence was: *Penicillium* spp., *Aspergillus* spp., *Acrostalagmus albus*, *Trichoderma lignorum*, *T. koningi*, *Alternaria humicola*, and *Cephalosporium acremonium*. The fungi present in the southern soils were found collectively to decompose cellulose more rapidly than those in the northern; individually the species *T. lignorum* and *T. koningi* were the most active in both groups of soils. The individual activity of the fungi was measured both by the number of days needed to decompose a given amount of cellulose and by the percentage of cellulose decomposed during a given number of days. It appears from these results that the biological activity of the different species is directly correlated with their degree of prevalence in the soil.

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SMIRNOV, V. N.

"The 'Gothic' phenomenon in the potato of the 'Lorkh' variety," Doklady (Mosk. s.-kh. akad. im. Timiryazeva), Issue 9, 1948, p. 106-13

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, T.N., kand.biol.nauk

Mycotoxicosis control, concern to agronomists and phytopathologists. Zashch. rast. ot vred. i bol. 3 no.5:25 S-O '58. (MIRA 11:10)

1. Kafedra fitopatologii Moskovskoy ordena Lenina sel'skokhozyaystvennoy akademii im. K.A. Timiryazeva.
(Fungi, Phytopathogenic)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, T.N., dots., kand. biol. nauk

Phytotoxic fungi as a cause of soil exhaustion in the monoculture of flax [with summary in English]. Izv. TSKhA no.6:49-58 '58. (MIRA 12:1)

(Soil micro-organisms) (Flax)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, T.N., dots.

Preventing epiphytotics of smut on virgin land. Zashch.rast. ot vred. i bol. 4 no.1:18-19 Ja-F '59. (MIRA 12:2)
(Smuts)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, Tat'yana Nikolayevna; IVANOVA, I.S., red.; SIDOROVA, V.I., red.izd-va; MULIKOVA, I.F., tekhn.red.

[Practical manual in general phytopathology] Praktikum po obshchei fitopatologii. Moskva, Gos.izd-vo "Vysshaia shkola," 1960. 175 p. (MIRA 14:4)
(Plant diseases)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

S/130/61/000/012/005/006
A006/A101

AUTHORS: Podol'skaya, G. A., Karpov, G. D., Shklyar, V. S.

TITLE: Section furnaces for high-speed metal heating

PERIODICAL: Metallurg, no. 12, 1961, 36-38

TEXT: Section furnaces were mounted in 1959 at the ball rolling shop of the "Azovstal'" Plant. The furnaces have different features according to the capacity of the rolling mills. Furnace no. 1 has 5 zones with 4 sections each, and supplies heated metal to mill 620 for the rolling of balls of 40, 50, 60 and 80 mm in diameter. Furnace no. 2 consists of 6 zones, 5 of which have 4, and the sixth 5 sections; this furnace supplies mill 1040 for rolling balls of 60, 80, 100 and 115 mm in diameter. The furnaces are fuelled with a mixture of coke and blast furnace gas from a common collector. The blanks are moved by water-cooled rolls mounted at an angle of 8° in respect to the axis, which is perpendicular to the motion of the blanks. This arrangement assures uniform heating of the blanks. Satisfactory circulation of the furnace gases is assured by the tangential arrangement of torches (Fig. 2). The specific duration of heating the blanks is 1.5 - 2 min/cm thickness. The air is heated in recuperator-

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Section furnaces for high-speed metal heating

thermoblocks. The heat load is automatically regulated; however, this method shows some deficiencies, such as inertia of devices, lack of a device to determine the temperature of metal heating; and unsatisfactory arrangement of the devices in the shop. Requirements to refractory material are very high because of considerable changes in temperature. It was found that chrome-magnesite bricks showed satisfactory results when used as a lining for the furnace walls and the bottom. According to the heat conditions developed, the furnaces are intended to operate at 1,150 - 1,300°C, i.e. relatively low temperature range which facilitates the service conditions of the refractory masonry. Presently the rated efficiency of the mills has been reached for the rolling of 40, 60 and 80 mm diameter balls. There are 2 figures.

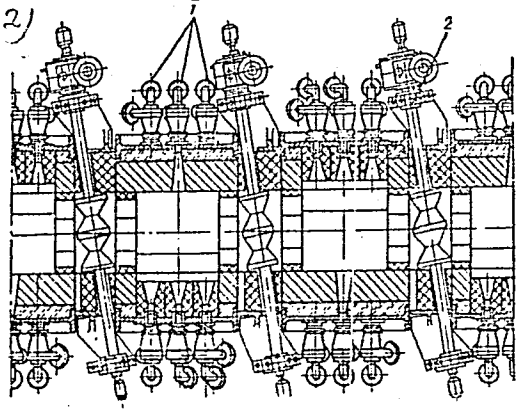

Fig. 2: Arrangement of torches 1 and rolls 2 in the furnace

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SHKLYAR, V. S., inzh.; BUL'SKIY, M. T., inzh.

Operation of compartment furnaces at the Azovstal' Plant.
Met. i gornorud. prom. no.1:72-74 Ja-F '63. (MIRA 16:4)

(Furnaces, Heating)
(Zhdanov--Rolling mills--Equipment and supplies)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, V.S., inzh.

Loss of metal during rapid heating in compartment furnaces. Stal' 23 no.3:266-268 Mr '63. (MIRA 16:5)

1. Donetskiy filial Ukrainskogo nauchno-issledovatel'skogo instituta metallov.
(Furnaces, Heating) (Oxidation)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, V.S.

Heat transmission of rollers in sectional furnaces. Stal' 23 no.8:759-761 Ag '63. (MIRA 16:9)
(Furnaces, Heating)
(Rolling mills--Equipment and supplies)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, V.S.

Flow of gases and the convective heat exchange in compartments. Izv. vys. ucheb. zav.; chern. met. 7 no.7:221-226 '64
(MIRA 17:8)

1. Donskoy gornometallurgicheskiy institut.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

[redacted], V.A., inzh.; SHALIAN, V.S.

Automatic control of metal heating. Mekh.i avtom.proizv. 18
no.2:1-3 F '64. (MIRA 17:4)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

BEREZHINSKIY, A.I., kand.tekhn.nauk; SHKLYAR, V.S., inzh.

Technological utilization of heat in high-speed metal heating.
Prom. energ. 19 no.3:9-11 Mr '64. (MIRA 17:4)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYAR, V.S.

Optimum number of burners in furnace compartments for rapid heating. Izv. vys. ucheb. zav.; chern. met. 7 no.8:167-170 '64. (MIRA 17:9)

1. Donetskiy nauchno-issledovatel'skiy institut chernoy metallurgii.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

ACC NR: AT7007100 (N) SOURCE CODE: UR/3207/66/000/004/0049/0055

AUTHOR: Shklyar, V. S.; Iodko, E. A.; Podol'skaya, G. A.

ORG: Donnilenermet

TITLE: Method of mass transfer simulation of the thermal and hydrodynamic processes

SOURCE: Gidromekhanika, no. 4, 1966, 49-55

TOPIC TAGS: thermal process, hydrodynamic process, diffusion model, mass transfer, mass exchange, Reynolds number, simulation, friction, friction stress, heat exchange, heat transfer

ABSTRACT: A study was made of the mass transfer simulation of thermal and hydrodynamic processes. The relationships to be observed for simulating heat-mass-exchange processes on a diffusion model are defined. This substantiates the possibility of diffusion simulation of hydrodynamically-similar processes in a self-similar region in the absence of equality of Reynolds numbers. This, in turn, expands the class of problems which can be solved by the diffusion model. It is

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shown that by using the diffusion model with nonreclaimable adsorption boundaries, the concentration of impurities at the boundary is not equal to zero. The study presents a method for using the results of mass transfer simulation for computing friction stresses and velocities. A procedure has also been developed for simulating heat-mass-exchange processes with the use of light-sensitive paper as the absorbent material which makes it possible to improve the reproducibility of the results and to facilitate the construction of the model. The authors acknowledge the participation of V. A. Blashchuk, G. I. Novozhilov, and T. I. Tret'yakova in this study. Orig. art. has: 2 figures and 28 formulas. [NT]

SUB CODE: 13, 20/SUBM DATE: none/ORIG REF: 005/OTH REF: 001/

Card 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

DYKHENKO, I.I., nauchnyy sotrudnik; SHKLYAR, Ya.I., nauchnyy sotrudnik

The SNT-2,1 self-propelled loader. Mekh. sil'. hosp. 13 no.8:7-8 Ag '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy svekly.
(Agricultural machinery)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SOV/120-58-2-31/37

AUTHORS: Abzianidze, K. M. and Shklyar, Z. A.

TITLE: A Transistorised Single Pulse Generator (Generator odinochnykh impul'sov na tranzistorakh)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 2, p 108 (USSR)

ABSTRACT: A well-tried system which produces a single pulse at the touch of a button is described. The single pulse generator consists of the following main elements: (1) a trigger with two stable states T_1 and T_2 ; (2) a trigger with one stable state T_3 and T_4 ; (3) buttons of type KN-P; (4) a switch of type TP1-2 used to switch off the supplies; (5) supplies consisting of two small batteries (type KBS-X-07 normally used for a pocket torch). When the button is pressed a negative voltage is applied to the base of the transistor T_2 through the by-pass capacitor C_3 . Suppose that in the initial state of the trigger the transistor T_1 is open and T_2 is cut off. In that case the negative voltage

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A Transistorised Single Pulse Generator.

applied to the base of T_2 fires the trigger. This opens T_2 and cuts off T_1. The negative drop of potential which appears at the same time on the collector of T_1 is differentiated by the capacitor C_5 and is applied to the base of T_3. In the initial state of the trigger with one stable state, the transistor T_3 is cut off and T_4 conducts. The negative pulse from the collector of T_1 makes T_3 conduct which cuts off T_4. This takes place very fast since it has a relaxation character. The time during which T_3 conducts and T_4 is cut off is determined by the time constant of the discharge of the capacitor C_8. At a certain instant of time when the potential on the base of T_4 reaches the value which makes T_4 conducting the system reverts to a stable state in which T_3 is cut off and T_4 conducts. In this way when the button is depressed a positive pulse appears on the collector of T_3 and can be taken out

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A Transistorised Single Pulse Generator.

at the output of the circuit. When the button is released the trigger with two stable states fires again due to the negative pulse applied to the base of T_1. This leads to the appearance of a positive pulse at the base of T_3 which cuts off the latter even more. For this reason when the button is released no pulse appears at the output. If after the system is switched on the transistor T_2 turns out to be conducting and T_1 cut off, then when the button is pressed down the trigger with two stable states will not operate. But in this case this has no effect on the trigger with one stable state as was shown above. However, the system is now ready to work and a pulse will appear at the output each time the button is pressed down. The generator may be synchronised by external pulses applied to the capacitor C_5. The amplitude of the pulse from the collector of T_3 may be varied within the range 0-9 v by the potentiometer R_8. The length of the pulse may be varied

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Transistorised Single Pulse Generator.

continuously within the range 10-20 μsec by means of the potentiometer R_{10} . If necessary, it may be considerably increased by replacing C_8 with a larger capacitor. The leading edge of the pulse is 1.5 μsec long and the tail is 3 μsec long. The working current of the generator is only 6 mamp which means that the batteries last for quite a long time. There is 1 figure.

SUBMITTED: August 19, 1957.

1. Pulse generators--Design
2. Pulse generators--Equipment
3. Transistors--Application
4. Pulse generators--Operation

Card 4/4

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L 13273-66 EWT(d)/EWT(1)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWA(h)/ETC(m) IJP(c)
ACC NR: AP6003185 WW/EM SOURCE CODE: UR/0147/65/000/004/0075/0083

AUTHOR: Shklyarchuk, F. N.

ORG: none

TITLE: Axially symmetric oscillation of a liquid in an elastic cylindrical container with an elastic bottom

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 4, 1965, 75-83

TOPIC TAGS: fluid mechanics, ~~liquid~~ oscillation, ~~liquid-filled cylindrical container~~, ~~Neumann problem~~

ABSTRACT: The problem of axisymmetric oscillation of an ideal incompressible liquid in an elastic open cylindrical container with an elastic bottom is studied. Considering only small oscillations, a system of three linear partial differential equations in cylindrical coordinates is taken whose exact solutions are sought for the case of a cylindrical container with a flat bottom. By introducing the potential of displacements (axial and radial) of liquid particles, the first equation is reduced to the Laplace equation and the second two equations to the Cauchy integral; and finally, the oscillation problem is reduced to the second boundary-value problem of potential theory (the Neumann problem) for a circular cylinder. The potential of displacements is sought in the form of a sum of four potentials, each of them satisfying the Laplace equation. The first potential accounts for the averaged displacements

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ACC NR: AP6003185

of the bottom and the wall of the cylinder, the second and the third account for the nonuniform displacements of the bottom and the wall, respectively, and the fourth one accounts for the motion of the free surface of the liquid. All four potentials as well as the pressure inside the container, the pressure on the bottom, and the kinetic and potential energies are determined. In the approximate determination of the motion of a liquid in open containers having the form of a non-shallow body of revolution, the hypothesis of the "plane motion" of a liquid is applied (the liquid is considered to be composed of a system of infinitesimally thin plane layers separated by rigid movable diaphragms). The dynamic pressure inside the liquid in such a container, the kinetic energy of the liquid, and the axial dynamic pressure for a cylinder with a spherical bottom are established. The approximate solutions obtained for the "plane motion" of a liquid inside an elastic cylinder are compared with exact solutions and solutions obtained through using other hypotheses. Orig. art. has: [LK]
2 figures and 36 formulas.

SUB CODE: 20/ SUBM DATE: 03Mar65/ ORIG REF: 003/ ATD PRESS: 4185

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L 11193-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWA(h)/ETC(m)-6 IJP(c) WW/EM
ACC NR: AP6002328 SOURCE CODE: UR/0373/65/000/006/0123/0129

35
34
B

AUTHOR: Shklyarchuk, F. N. (Moscow)

ORG: none

TITLE: On an approximate method of determining axisymmetric vibrations of liquid-filled shells of revolution

SOURCE: AN SSSR. Izvestiya. Mekhanika, no. 6, 1965, 123-129

TOPIC TAGS: shell vibration, liquid filled shell, liquid filled shell vibration

ABSTRACT: The hydrodynamic pressure in a liquid filling a vessel is determined approximately, neglecting the wave motions on the free surface ("plane-motion" hypothesis). An equation is derived for the "plane motion" of a layer of liquid in a vessel and its solution and a formula for determining the total (static and dynamic) pressure in the liquid are presented. These means are used to determine the lower frequencies and modes of axisymmetric vibrations of arbitrarily shaped nonshallow shells of revolution filled with liquid. The Ritz and successive-approximation methods are used in the investigation. The vibration of a cylindrical membrane-stressed shell with a rigid flat bottom, fixed along the lower face is analyzed and the results obtained are compared with the data of an exact investigation. Two sample analyses of the vibrational behavior of shells of revolution are given: 1) of a conical shell completely filled with liquid; the shell is fixed along the edge to resist tangential displace-

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ments, and the deformation caused by the hydrostatic pressure is taken as the first approximation; in the second and third approximations, a formula for determining the frequency is obtained; and 2) of a cylindrical liquid-filled shell with a spherical bottom, by analyzing the displacements of walls and of the bottom and using the equations of the potential strain energy of the shell and of the kinetic energy of the liquid-filled shell. Cylindrical shells with shallow bottoms are also discussed. The results obtained are compared with the data of exact solutions and experiments. Orig. art. has: 5 figures and 30 formulas. [VK]

SUB CODE: 20/ SUBM DATE: 10Dec64/ ORIG REF: 003/ ATD PRESS: 4194

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYARENKO, L.M., inzh.

How we are reducing operational costs. Put' i put. khoz. no.6:2-4 Je '59. (MIRA 12:10)

1. Nachal'nik distantsii puti, stantsiya Moskva-Kiyevskaya.
(Moscow Province--Railroads--Cost of operation)
(Moscow Province--Railroads--Track)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYARENKO, L.M. inzh.

Using new methods for the organization of current track maintenance in the division. Put' i put.khoz. 5 no.4:2-4 Ap '61. (MIRA 14:7)

1. Nachal'nik Moskovsko-Kiyevskoy distantsii Moskovskoy dorogi.
(Railroads--Track)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001549620020-2

SHKLYARENKO, L.M., inzh.

Wage system for specialized trackmen. Put'i put.khoz. 5 no.5:20-22 My '61. (MIRA 14:6)

1. Nachal'nik Moskovsko-Kiyevskoy distantsii Moskovskoy dorogi.
(Railroads--Salaries, pensions, etc.)

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SHKLYARENKO, L.M., inzh.

Constantly increase labor productivity. Put' i put. khoz. 7 no.5:3-7 '63. (MIRA 16:7)

1. Nachal'nik sluzhby puti Moskovskoy dorogi.
(Railroads--Labor productivity)

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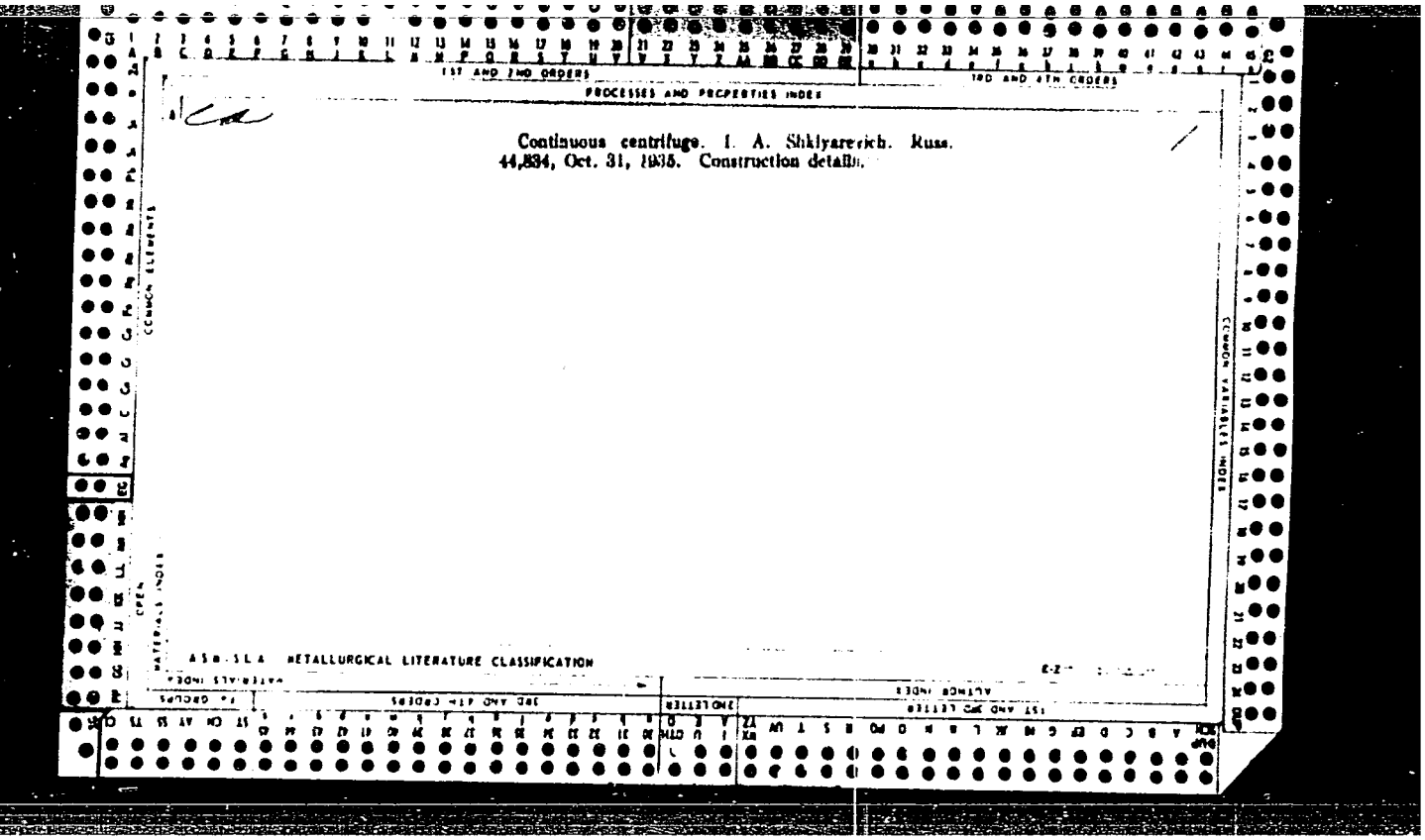

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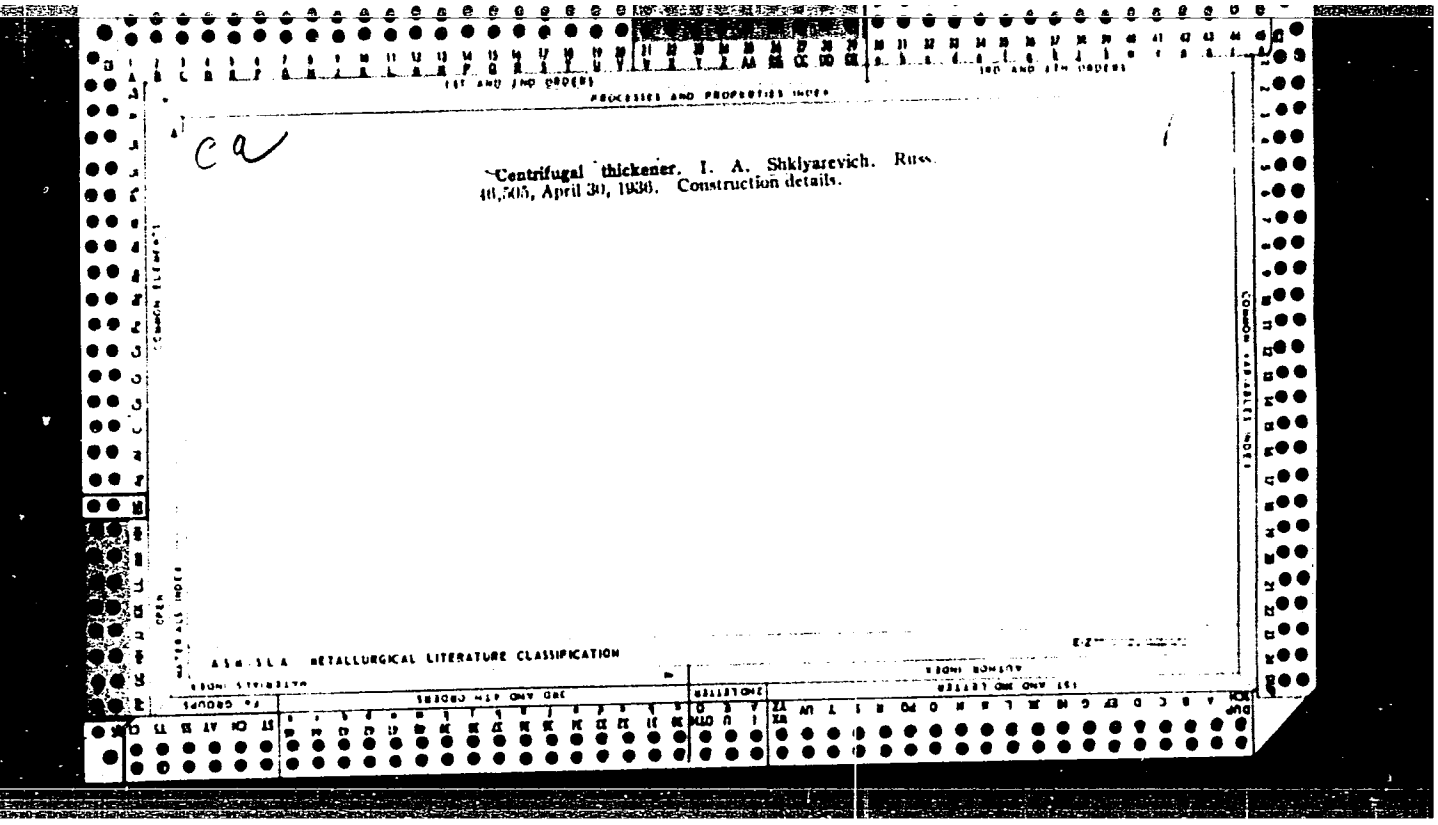

Centrifugal thickener. I. A. Shklyarevich. Russ. 40,705, April 30, 1938. Construction details.

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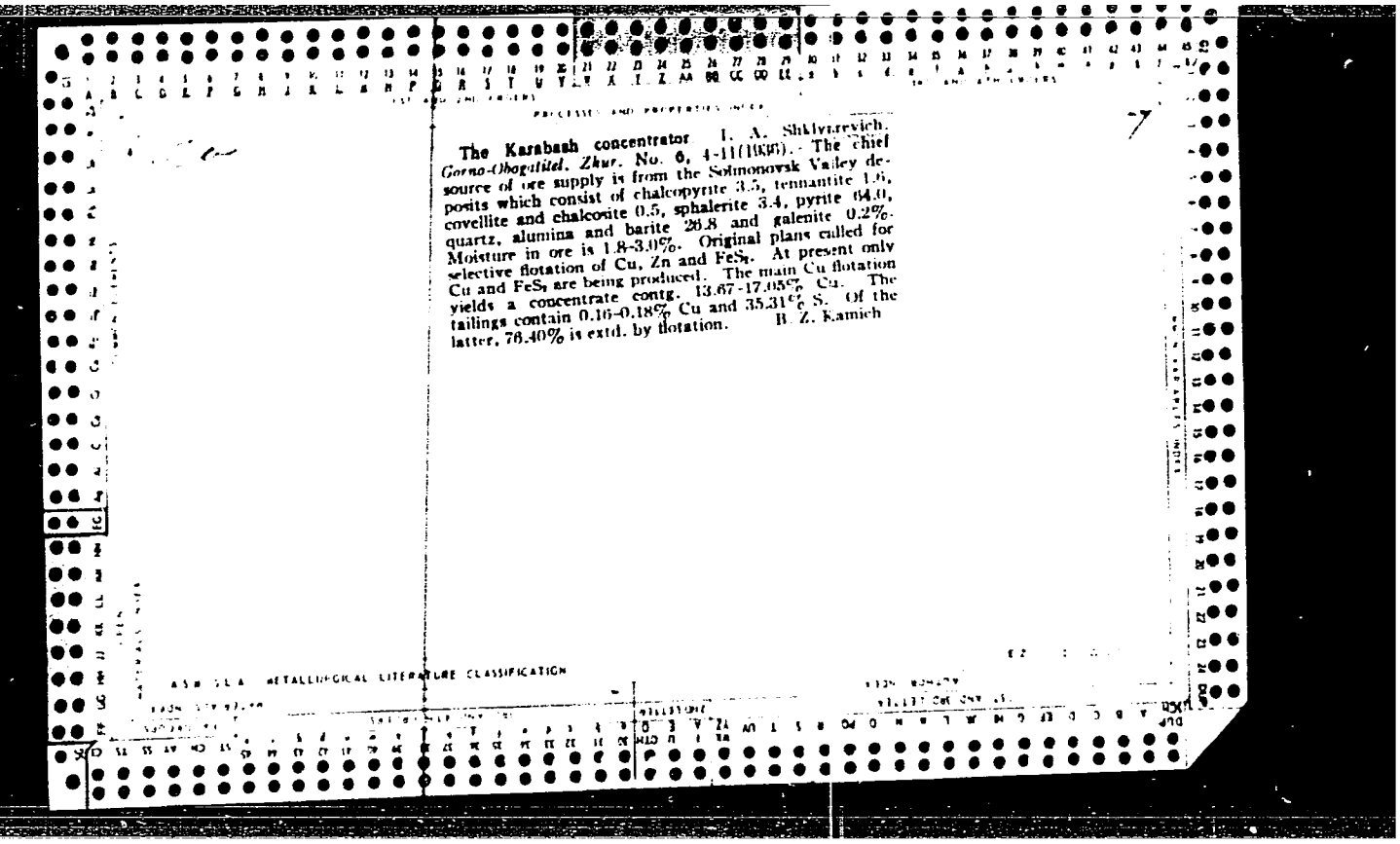

The Karabash concentrator I. A. Shklyarevich. *Gorno-Obogatitel. Zhur.* No. 6, 4-11(1959).- The chief source of ore supply is from the Solmonovsk Valley deposits which consist of chalcopyrite 3.5, tennantite 1.6, covellite and chalcosite 0.5, sphalerite 3.4, pyrite 84.0, quartz, alumina and barite 26.8 and galenite 0.2%. Moisture in ore is 1.8-3.0%. Original plans called for selective flotation of Cu, Zn and FeS_2. At present only Cu and FeS_2 are being produced. The main Cu flotation yields a concentrate contg. 13.67-17.05% Cu. The tailings contain 0.16-0.18% Cu and 35.31% S. Of the latter, 76.40% is extd. by flotation. B. Z. Kamich

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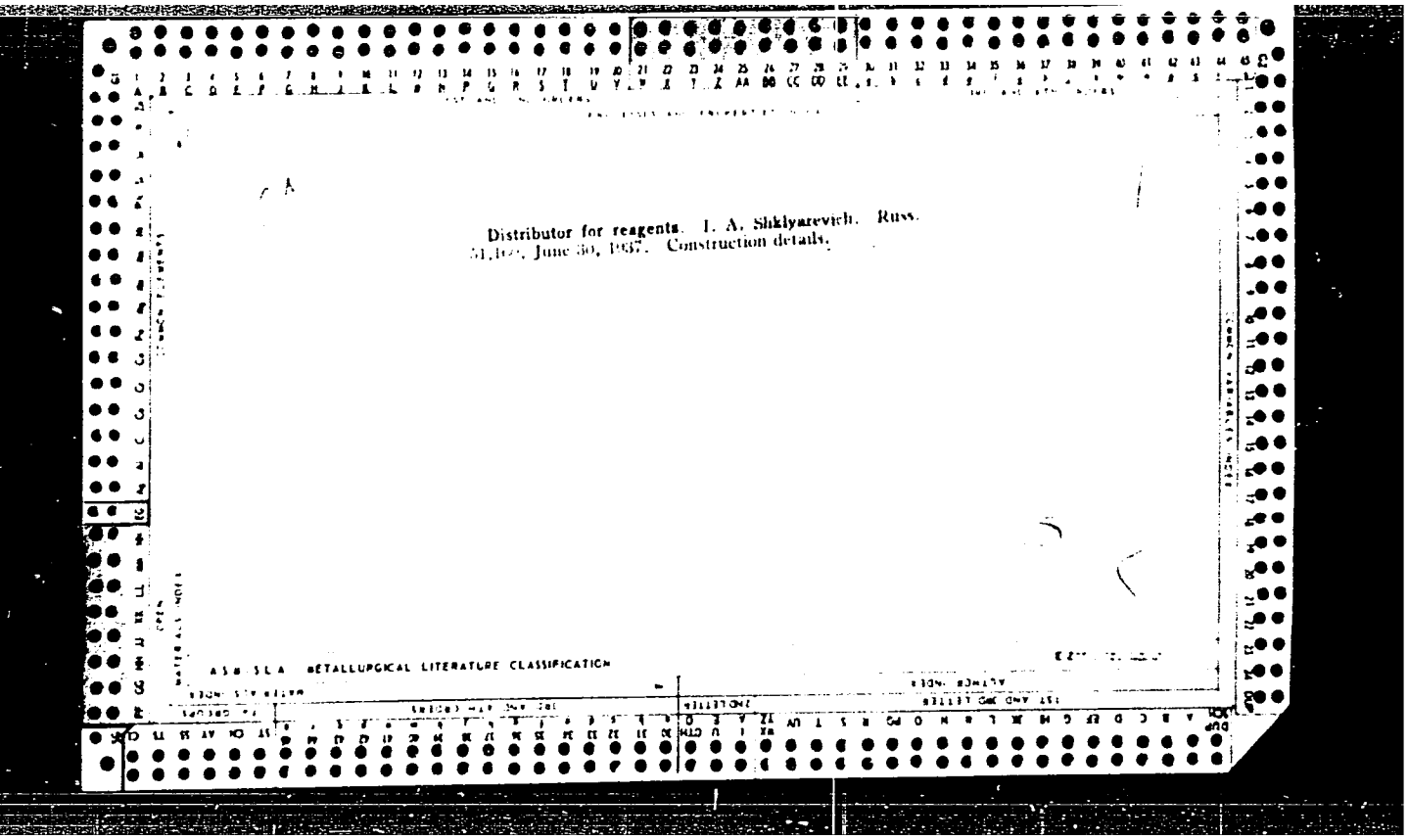

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SHKLYAREVICH, I. A. PA 18T50

USSR/Ore Deposits Jun 1947
Mineral Industries

"Preparation of a Raw Material Base for the North-Western Metallurgical Factories," I. A. Shklyarevich, 5 pp

"Gornyy Zhurnal" Vol CXXI, No 6

One of the tasks of the Five-Year Plan is the construction of a new coal-metallurgical base in the Leningrad region, to serve that general area. Because of location of ores, this base will be built in the vicinity of Cherepovtsa. Graphs and diagrams of purifying of ore and the various by-products.

18T50

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SHKLYAREVICH, I.A.

Use of high vacuum to accelerate the sintering pro[illegible]
rud 6 no.5:34-35 '61. (MIRA [illegible])
(Sintering)

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